## Submission of Caterpillar Inc. to the United States International Trade Commission Investigation No. 332-525

Caterpillar is a global leader in remanufacturing. Remanufacturing is an integral part of Caterpillar's business. Caterpillar and its subsidiaries ElectroMotive Diesel ("EMD"), Progress Rail Services and Solar Turbines offer a wide range of remanufactured goods and services.

For more than 85 years, Caterpillar Inc. and its subsidiaries have been making sustainable progress possible and driving positive change on every continent. With 2011 sales and revenues of \$60.138 billion, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and dieselelectric locomotives. The remanufacturing operations of Caterpillar and its subsidiaries are a significant contributor to Caterpillar's financial results. Figure 1

depicts the percentage growth in Caterpillar's remanufacturing business during the time period 2006 to 2011, based on 2001.

Unfortunately, while Caterpillar is making sustainable progress possible in many parts of the world, some countries and their citizens are missing out. Non-tariff trade barriers limit Caterpillar's access to markets in many developing countries, notably the BRIC countries – Brazil, Russia, India and China.

## Remanufacturing - Overview of the Caterpillar Enterprise

In the early 1970s, Caterpillar Inc. and Solar launched its remanufacturing operations to provide aftersales product support to

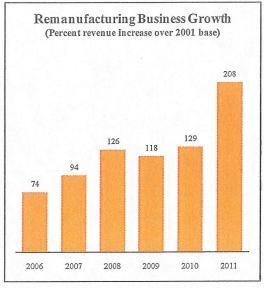


Figure 1

customers. Progress Rail and EMD have been dismantling, repowering and remanufacturing locomotives, railcars and related components for decades.

Over the years, Caterpillar and its subsidiaries expanded their remanufacturing operations across the United States and around the world. Today, the Caterpillar enterprise remanufactures more than 14,500 products for its own businesses and other original equipment manufacturers ("OEMs"). The array of components remanufactured by the Caterpillar enterprise range from engines, turbines, gas compressors, locomotives, railcars to hydraulics, drivetrains, turbochargers and fuel systems.

<sup>&</sup>lt;sup>1</sup> Refer to financial information provided in Caterpillar's response to the U.S. International Trade Commission Investigation No. 332-525 questionnaire.

Caterpillar's enterprise remanufacturing operations include 8,465 workers in 68 facilities in 35 U.S. states and 15 foreign countries (Figure 2).

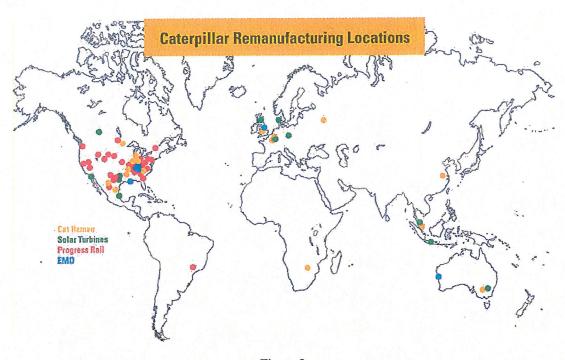


Figure 2

Demand for the remanufactured goods is driven by our customers. Caterpillar, EMD, Progress Rail Services and Solar Turbines develop their product offerings to meet customers' needs. For example, EMD offers a spectrum of remanufacturing services from a "repower" (i.e., replacing a locomotive's engine with a same-as-when-new remanufactured diesel engine) to a "rebuild and upgrade" (i.e., replacing a locomotive's control system and/or engine with a more fuel efficient or lower emissions remanufactured diesel engine) to a "rebuild in kind" (i.e., a full overhaul of the locomotive including the engine, control system, wiring and more). Likewise, Progress Rail Services offers its railroad customers a complete line of remanufactured railcar components. Remanufactured components are used at key railroad repair locations throughout North America to make rapid repairs and keep the North American rail network running smoothly.

For Caterpillar and its subsidiaries, the availability of remanufactured goods is critical. Immediate availability of replacement turbines, engines as well as locomotive, railcar and machine components allows customers to remain competitive and gives customers more options when they make decisions about repairing, replacing or upgrading their equipment. For customers, the result is maximizing uptime, increasing productivity and reducing owning and operating costs.

In the case of turbine engines, the use of a remanufactured unit can mean the difference between several days to exchange with a remanufactured unit versus up to four months to remove, transport, overhaul, and return an end-of-life unit to the customer. This "uptime benefit" from remanufactured turbines can mean literally hundreds of thousands to millions of dollars in production for many customers.

## What is Remanufacturing?

Remanufacturing is the process of returning end-of-life products to the same as original new condition or better in a manufacturing environment. Remanufacturing promotes a sustainable environment by reducing waste and the need for raw materials to make new parts.

Products are returned to their original "same-as-when-new" or better condition through advanced remanufacturing technology and factory processes of Caterpillar and its subsidiaries. The Caterpillar enterprise develops and validates its remanufacturing techniques internally and in cooperation with its major customers and trade groups such as the Association of American Railroads ("AAR"). Remanufactured products are thoroughly tested to ensure that they meet or exceed Caterpillar's specifications in the case of Caterpillar equipment, or that they meet stringent safety and reliability standards, in order to equal or exceed their expected life cycle service demands, in the case of rail equipment. In fact, remanufactured products often have better durability, life span and performance than when the item was originally manufactured.

Caterpillar's remanufacturing businesses generally use an exchange model. The raw material used to produce a remanufactured product is a worn out or end-of-life article called a "core." When Caterpillar sells a remanufactured product to a customer, the price typically includes two parts – the price of the remanufacturing service or component and the value of the core.

In most instances, Caterpillar charges the customer a core deposit to ensure that the customer returns the core to Caterpillar. Once the customer returns a qualifying core, any core deposit due to customer is refunded. At the end of a transaction, the customer has a remanufactured product with the same warranty and quality of a new product, but at a lower than new cost. This exchange model helps ensure that Caterpillar and its subsidiaries have a steady supply of the raw material necessary to sustain their remanufacturing operations and allows the enterprise to recycle material that may have otherwise ended up in a landfill.

The process of remanufacturing a product includes the following basic steps:

• Commercial Core Inspection/Core Receiving — upon return of the core, it is inspected to determine if it meets program guidelines. Typically, these cores are received on an exchange basis from our customers. If the core meets the exchange program guidelines, then the "core deposit" is refunded. Some additional cores are also purchased in the market by our business units to replace customer cores that may have to be scrapped. Examples of cores used for remanufacturing include complete engines, engine components, cylinder packs,

water pumps, power turbines, accessory drives, reduction drive gearboxes, gas compressors, hydraulic components, transmissions and railcar wheelsets, suspensions and coupling systems.

• **Disassembly/Technical Inspection** – the core is completely disassembled into its constituent parts, down to the level of every individual nut and bolt. The parts are cleaned and inspected using Caterpillar's detailed specifications to ensure that the components are fit to be remanufactured.

• Remanufacturing technology – the individual parts are remanufactured to exacting specifications to ensure they provide the same quality, reliability and durability as they did when they were new. Caterpillar's proprietary technologies salvage a significant percentage of original material – reducing new parts usage.

- Engineering updates and assembly all appropriate engineering updates since the component was originally manufactured are included. Remanufactured components and products are assembled from a "pool" of finished remanufactured parts that originate from customer core returns or from cores purchased in the market.
- Test, package and sell the remanufactured engine, turbine, subsystem or component, etc. is then tested, painted or appropriately packaged and shipped to our customers.

The environmental benefits of remanufacturing are clear. Remanufacturing promotes a sustainable environment by reducing waste and the need for raw materials to make new parts.

In 2010, Caterpillar and its subsidiaries recycled approximately 2 billion pounds of end-of-life iron. Through remanufacturing, nonrenewable resources are kept in circulation for multiple lifetimes – supporting Caterpillar's enterprise goal for a zero landfill footprint by 2020. Also, remanufacturing a component requires 85% to 95% less energy and material than manufacturing the same new component.

Factors affecting sales, trade, and investment including recent trends

Caterpillar's remanufactured products are currently sold in 170 countries worldwide. In most countries, remanufactured goods are freely available to customers and are routinely purchased and used by end-user customers and Caterpillar is able to obtain cores from its customers.

However, there are still many countries (particularly certain developing countries) that impose tariff and non-tariff barriers to preclude or inhibit Caterpillar's ability to move remanufactured finished goods and core.

Non-tariff trade barriers often preclude or complicate the import and/or export of remanufactured finished goods as well as the core material needed to feed the remanufacturing process. The most typical example of non-tariff trade barriers is the absence of a definition of remanufactured goods. When remanufactured goods are not defined by statute, customs officials in many countries (particularly developing economies) treat remanufactured goods as "used" goods. Often, countries prohibit the importation of "used" goods, so Caterpillar is precluded from bringing its high quality

remanufactured goods to market or recovering core for use at its various remanufacturing facilities. For example, Brazil prohibits the importation of remanufactured locomotives in the 3,000 horsepower and lower range. This prevents many customers in Brazil from obtaining cost effective locomotives for switcher/shunter service, or for use on light density lines.

With durability, performance, quality, and warranty equal to new, Caterpillar's remanufactured products are clearly not "used" goods. For trade purposes, countries participating in the global economy should treat remanufactured goods in the same way they treat new finished goods.

Likewise, countries should not inhibit the movement and export of core necessary to enable remanufacturing by OEMs. Countries sometimes restrict the movement of core due to concerns that the cores will be resold in the used goods market. However, OEMs use core as the raw material to create their remanufactured finished goods. Without core, remanufacturing is not possible. Stringent export documentation requirements can make it cumbersome or impossible for the current owner to export a core and thus receive a refund of its core deposit or avoid a penalty for not returning a usable core. For example, to export a core from Russia, a customer must provide documentation connecting the core being exported with the original product that was imported. As you might imagine, it can be very difficult for the current owner of a Cat machine, engine or component to track down the importation documentation the original purchaser/importer used to import the machine or component years ago.

Imprecise or underdeveloped tax laws can negatively impact remanufacturers and their customers. In certain instances, the VAT laws in particular countries impose a tax on the initial core deposit and later impose a second tax on the refund of the core deposit. By treating the single transaction as two transactions, these countries add significant cost to the remanufacturing exchange model and make it more expensive for both the OEM and the end user customer to purchase and utilize remanufactured products.

Finally, for government owned assets, such as an engine used by a state owned oil company, exchange transactions are often difficult or impossible because of restrictions on exporting government owned assets (i.e., the cores). These regulations need to be modernized to authorize government customers to remanufacture government owned assets through remanufacturing exchange programs.

## Conclusion

Remanufactured products are good for customers. By lowering operating costs, reducing down-time and improving productivity, customers and consumers around the world benefit from Caterpillar's remanufacturing operations.

Remanufactured products are good for business. The Caterpillar enterprise remanufacturing business meets a critical need of our customers. Through remanufacturing, Caterpillar can offer our customers improved aftersales support and product availability plus a broader product line.

Remanufacturing is good for the environment. Because of the high percentage of product that Caterpillar salvages during the remanufacturing process, our remanufactured products require fewer raw materials, retain the value added in the original manufactured article and minimize energy consumption.

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